

527,556

Rec'd PCT/PTC 11 MAR 2005

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
1 April 2004 (01.04.2004)

PCT

(10) International Publication Number
WO 2004/027503 A1

(51) International Patent Classification⁷: G02F 1/1343

(21) International Application Number:
PCT/KR2002/002055

(22) International Filing Date:
5 November 2002 (05.11.2002)

(25) Filing Language: Korean

(26) Publication Language: English

(30) Priority Data:
2002-56872 18 September 2002 (18.09.2002) KR

(71) Applicant (for all designated States except US): SAM-
SUNG ELECTRONICS CO., LTD. [KR/KR]; 416 Mae-
tan-dong, Paldal-ku, 442-370 Suwon-city, Kyungki-do
(KR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): ROH, Nam-Seok

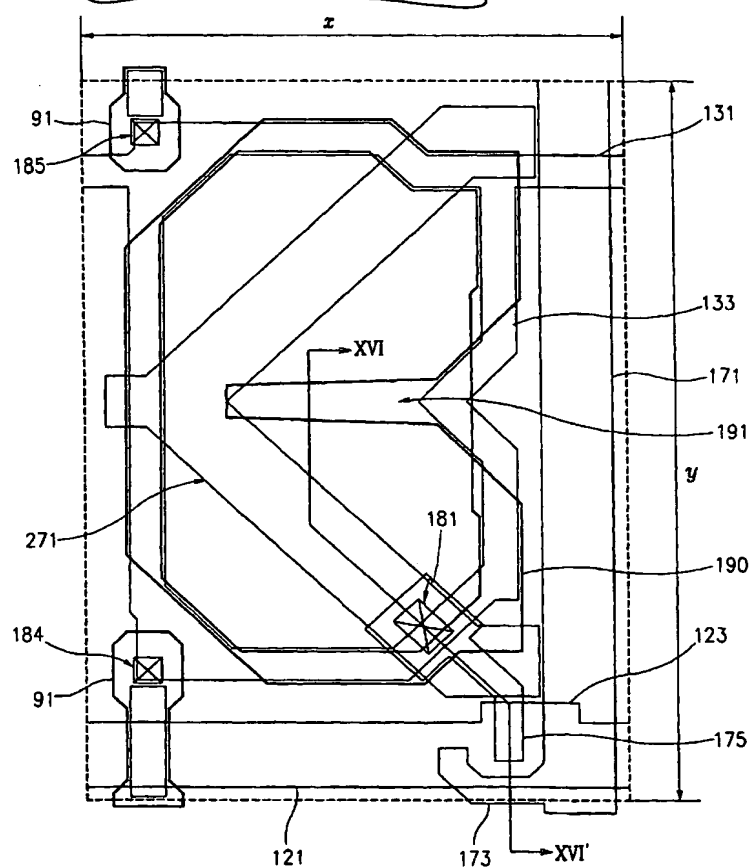
[KR/KR]; Hyojachon Hwasang Apt.607-703, Seo-
dang-dong, Bundang-ku, 463-055 Seongnam-city,
Kyungki-do (KR). CHAE, Chong-Chul [KR/KR];
Samsung Apt. 102-1004, Singongdeok-dong, Mapo-ku,
121-030 Seoul (KR). SHIN, Kyong-Ju [KR/KR];
Samjeongseonbimaecul, 102-504, Bora-ri, 289-12, Gihe-
ung-eub, 449-900 Yongin-city, Kyungki-do (KR).

(74) Agent: YOUME PATENT & LAW FIRM; Teheran
Bldg., 825-33, Yoksam-dong, Kangnam-ku, 135-080
Seoul (KR).

(81) Designated States (national): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK,
LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX,
MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI,
SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC,
VN, YU, ZA, ZM, ZW.

[Continued on next page]

(54) Title: LIQUID CRYSTAL DISPLAY



(57) Abstract: A liquid crystal display is provided. Red, blue and green pixels are sequentially arranged in a row direction. The red pixels and the green pixels are alternately arranged in a column direction and the blue pixels are arranged in the column direction. Four red and green pixels surrounding adjacent two blue pixels in neighboring two pixel rows face each other. Pixel electrodes and a common electrode have cutouts. A ratio of horizontal to vertical of each pixel is equal to 2:3. In this structure, a PenTile Matrix driving provides high resolution images, and the control of the arrangement of the liquid crystal molecules by the cutouts of the pixel electrode and the common electrode and the common electrode provides wide viewing angle.

WO 2004/027503 A1